

Applicant(s): Cornelis Bernardus Aloysius Wouters
Serial No.: 09/846,596
For: METHOD, SYSTEM AND COMPUTER PROGRAM FOR STORAGE MEDIUM DATA MANAGEMENT
(formerly Method, System and Computer Program)
Filed: April 30, 2001
Examiner: Woo H. Choi
Group Art Unit: 2189

NL000240

IN THE CLAIMS:

Please consider the claims as follows:

1. (Currently amended) A method of data management on a storage medium-(10), the storage medium (10) comprising a plurality of blocks (21) in which data can be stored, a first block (22) from said plurality of blocks being selected to execute a mutation on, comprising the steps of:

determining, based on a limit value and a value of a counter associated with the first block, whether a wear level of the first block (22) is acceptable for executing the mutation, and if so, executing the mutation on the first block-(22), and otherwise

choosing from said plurality of blocks a second block (23) with a lower wear level than the first block-(22), and

copying the data of the second block (23) to the first block-(22),

wherein each of the blocks has an associated counter for counting the number of mutations in the block that is used as an indicator of the block wear level, and

increasing the limit value when a predetermined number, which is at least the majority, of the counters of the blocks exceed the limit value.

2. (Currently amended) A method as claimed in claim 1, ~~characterized in that~~ wherein when the value of the counter of the first block (22) is smaller than the limit value, the value of the counter is increased and the mutation is executed, and otherwise a block of which the counter has a lower value than the counter of the first block (22) is chosen as the second block-(23).

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3. (Currently amended) A method as claimed in claim 2, ~~characterized in that~~wherein the lower value is the lowest value of the values of the counters of the blocks from said plurality of blocks.

4. (Cancelled).

5. (Currently amended) A method as claimed in claim 1, further comprising the step of:

erasing the second block after the data of the second block ~~(23)~~ have been copied to the first block ~~(22)~~.

6. (Currently amended) A method as claimed in claim 1, ~~characterized in that~~wherein the mutation comprises erasing the first block ~~(22)~~.

7. (Currently amended) A system for data management on a storage medium ~~(10)~~, the storage medium ~~(10)~~ comprising a plurality of blocks ~~(21)~~ in which data can be stored, each block having an associated counter for counting the number of mutations in the block, the system being arranged for selecting a first block ~~(22)~~ from said plurality of blocks to execute a mutation on, comprising:

control means ~~(26)~~ for determining whether a wear level of the first block ~~(22)~~, as represented by the associated counter, is acceptable, based on a limit value and a value of the counter of the first block ~~(22)~~, for executing the mutation, and if so, executing the mutation on the first block ~~(22)~~, and for otherwise

choosing from said variety a second block ~~(23)~~ with a lower wear level than the first block ~~(22)~~, and

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copying the data of the second block (23) to the first block (22),

wherein the control means (26) are arranged for increasing the limit value when a predetermined number, which is at least the majority, of the counters of the blocks exceed the limit value.

8. (Currently amended) A system as claimed in claim 7, ~~characterized in that~~ wherein the control means (26) are arranged for, when the value of the counter of the first block (22) is smaller than the limit value, increasing the value of the counter and executing the mutation, and for otherwise choosing a block of which the counter has a lower value than the counter of the first block (22) as the second block (23).

9. (Currently amended) A system as claimed in claim 8, ~~characterized in that~~ wherein the lower value is the lowest value of the values of the counters of the blocks from said variety.

10. (Cancelled).

11. (Currently amended) A system as claimed in claim 8, ~~characterized in that~~ wherein the system is arranged for initially constructing a table in which the value of the counters of the blocks are stated.

12. (Currently amended) A system as claimed in claim 7, ~~characterized in that~~ wherein the control means (26) are arranged for erasing the second block (23) after the data from the second block (23) have been copied to the first block (22).

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13. (Previously presented) A computer program product comprising a computer-readable medium and enabling a programmable device to function as a system as claimed in claim 7.

14. (Currently amended) The method of claim 1, wherein said copying is preceded by the step of copying to another block ~~(24)~~ any stored data of said first block ~~(22)~~ that is not marked for erasure.

15. (Cancelled).

16. (Previously presented) The method of claim 1, wherein said predetermined number is equal to said majority.

17. (Cancelled).

18. (Cancelled).